

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Please cancel claims 1-7.

8. (New) A surface protective sheet used for grinding a back surface of a semiconductor wafer, wherein:

one surface of a base sheet is provided with an opening portion having a diameter smaller than an outer diameter of a semiconductor wafer to be stuck, on said opening portion no adhesive layer being formed, and a portion which is provided around the opening portion and on which an adhesive layer is formed.

9. (New) The surface protective sheet as claimed in claim 8, wherein the base sheet and the adhesive layer are cut to have almost the same diameter as that of a semiconductor wafer to be stuck, and the portion on which an adhesive layer is formed are of almost concentric circles.

10. (New) The surface protective sheet as claimed in claim 8, wherein the adhesive layer is a double side coated adhesive sheet wherein adhesive layers are provided on both surface of a core material film.

11. (New) The surface protective sheet as claimed in claim 10, wherein the core material film is polyethyleneterephthalate film.

12. (New) The surface protective sheet as claimed in claim 10, wherein one adhesive layer on the side facing the base sheet is an adhesive having strong adhesion strength and other adhesive layer on the side facing the wafer is an energy ray-curable adhesive which is cured by irradiation with energy rays to exhibit removability.

13. (New) A method for grinding a semiconductor wafer, comprising:
allowing a semiconductor wafer, on a circuit surface of which bumps are formed, to be in a surface-protected form wherein an adhesive layer having an opening portion with no adhesive corresponding to a portion of the wafer where the bumps are formed and an adhesive portion corresponding to an outer peripheral portion of the wafer where bumps are not formed is formed and a base sheet is laminated on the adhesive layer so as to cover the opening portion of the adhesive layer,
placing the semiconductor wafer of the surface-protected form on a fixing table in such a manner that the base sheet faces the fixing table, and
grinding a back surface of the semiconductor wafer.

14. (New) The method for grinding a semiconductor wafer as claimed in claim 13, wherein the adhesive layer is a double side coated adhesive sheet wherein adhesive layers are provided on both surface of a core material film.

15. (New) The method for grinding a semiconductor wafer as claimed in claim 14, wherein the core material film is polyethyleneterephthalate film.

16. (New) The method for grinding a semiconductor wafer as claimed in claim 14, wherein one adhesive layer on the side facing the base sheet is an adhesive having strong adhesion strength and other adhesive layer on the side facing the wafer is an energy ray-curable adhesive which is cured by irradiation with energy rays to exhibit removability.

17. (New) The method for grinding a semiconductor wafer as claimed in claim 13, wherein the semiconductor wafer is allowed to have the surface-protected form by:
supplying the adhesive layer in such manner that both surface of the adhesive layer are laminated with release films of light-releasable type and heavy-releasable type, layer and the release film of light-releasable type are punched to form o that the adhesive layer is supported on the release film of heavy-releasable type,
peeling the release film of light-releasable type while adhering the exposed surface of the adhesive layer to the base sheet, and

peeling the release film of heavy-releasable type while adhering the exposed surface of the adhesive layer to the outer peripheral portion of the wafer.

18. (New) The method for grinding a semiconductor wafer as claimed in claim 13, wherein the semiconductor wafer is allowed to have the surface-protected form by sticking the surface protective sheet of claim 8 or 9 to the circuit surface of the semiconductor wafer.

19. (New) The method for grinding a semiconductor wafer as claimed in claim 13, wherein the semiconductor wafer is allowed to have the surface-protected form by:
sticking the adhesive layer having an opening portion corresponding to a portion of the wafer where bumps are formed and an adhesive portion corresponding to an outer peripheral portion of the wafer where bumps are not formed, to the outer peripheral portion of the semiconductor wafer on a circuit surface of which bumps are formed, and
laminating the base sheet on the adhesive layer so as to cover the opening portion of the adhesive layer.

20. (New) The method for grinding a semiconductor wafer as claimed in claim 13, wherein the height of each bump formed on the circuit surface is 50 μm or more and the bump arranged on the outermost side is positioned at a distance of 2 to 10 mm from the outer periphery of the wafer.

21. (New) The method for grinding a semiconductor wafer as claimed in claim 13, wherein a difference (Bt-At) between the height (Bt) of each bump and the thickness (At) of the adhesive layer is in the range of -5 to 50 μm .

22. (New) The method for grinding a semiconductor wafer as claimed in claim 19, which further comprises the steps of:

supplying the adhesive layer in such manner that both surface of the adhesive layer are laminated with release films of light-releasable type and heavy-releasable type, wherein the adhesive layer and the release film of light-releasable type are punched to form

the opening portion, so that the adhesive layer is supported on the release film of heavyreleasable type.